



Short report

Homicide–suicide in Brescia County (Northern Italy): A retrospective study from 1987 to 2012



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ABSTRACT

From January 1987 to December 2012, 19 homicide–suicide events were registered at the Brescia Institute of Forensic Medicine (Northern Italy), leading to 39 deaths (20 homicide victims and 19 suicide victims). The homicide victims were females in the total of the cases (100%), while perpetrators were exclusively males (100%). Only one event involved foreigners as both victim and perpetrator, all the other cases regarded Italian people. The average age was 37.3 years for the homicide victims and 41.57 years for the offenders. Perpetrators usually used a firearm both for murder (65%) and suicide (84%). In 66% of the cases the homicide–suicide events occurred at home; homicide victims were strictly bound to their perpetrators (husband, boyfriend or ex boyfriend, father) in all the events.

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1. Introduction

Homicide–suicide is a particular kind of killing in which the perpetrator commits suicide after killing his victim(s). It is known by a variety of names, including murder–suicide and dyadic death. In Italy, from 2000 to 2008, 340 homicide–suicide events (with a total of 1000 victims) were registered.¹ The aim of this study was to describe and characterize all the homicide–suicide events reported at the Institute of Forensic Medicine in the County of Brescia between 1987 and 2012, covering a 26-year period. Brescia County is located in the Lombardy region (Northern Italy), with an area of 4784 square kilometers. It's one of the most relevant industrialized Italian site, with important cultural and economic exchanges and an high immigration rate. Its population has constantly grown in the last decades, reaching about 1,250,000 inhabitants in the last census (2011), with a life expectancy of 79.5 years for men and 84.7 years for women.²

2. Materials and method

All the homicide–suicide information came from the post-mortem investigations conducted by the Brescia Institute of Forensic Medicine from January 1987 to December 2012. Over this period, the Institute registered 240 homicide victims and 709 suicides: 20 homicides ended with perpetrator's suicide (19 events).

The data analyzed for each case included: (1) year, month and day of the event; (2) information about perpetrators' and victims' characteristics (sex, age, nationality); (3) relationship between offender and his victim(s); (4) injurious means; (5) place of the crime; (6) toxicological exam outcomes (whenever mandated by the Law).

3. Results

During the 26-year period (1987–2012), a total of 19 homicide–suicide events were registered in Brescia County, involving 39 persons: 20 homicide victims and 19 suicide victims. Only in one case the perpetrator committed a double homicide. The average of the events was 0.73 per year, with a slight prevalence in September (21%) and on Monday (26.3%). About one fifth of the cases occurred in 2001 (5 homicide and 4 suicide victims) (Fig. 1). Perpetrators committed suicide just after the homicide in all the events except one, in which suicide occurred the day after the homicide.

3.1. Perpetrators and victims

All the 20 homicide victims were females while the 19 perpetrators were exclusively males. Considering that all the victims were females, this phenomenon seems to belong to “femicide” (i.e. female killing) tragedy.

The mean age of the homicide victims was 37 years; most of them (6 woman, 30%) had an age between 21 and 30 years (Fig. 2; Table 5). Only one child was involved: a 3-years baby killed by his

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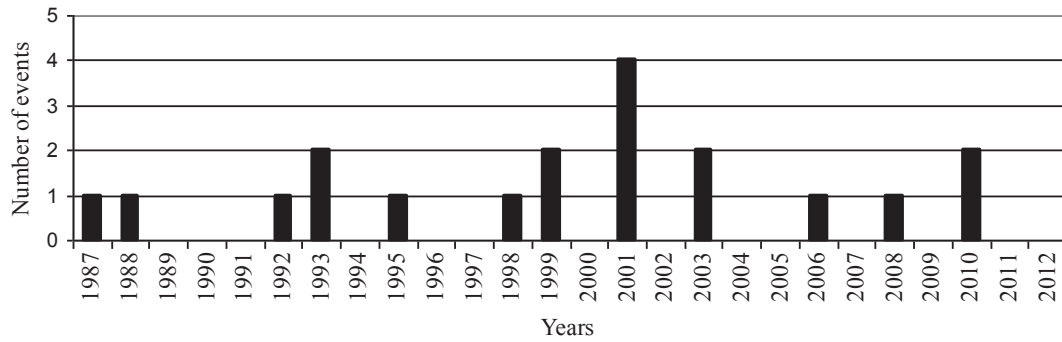


Fig. 1. Temporal distribution.

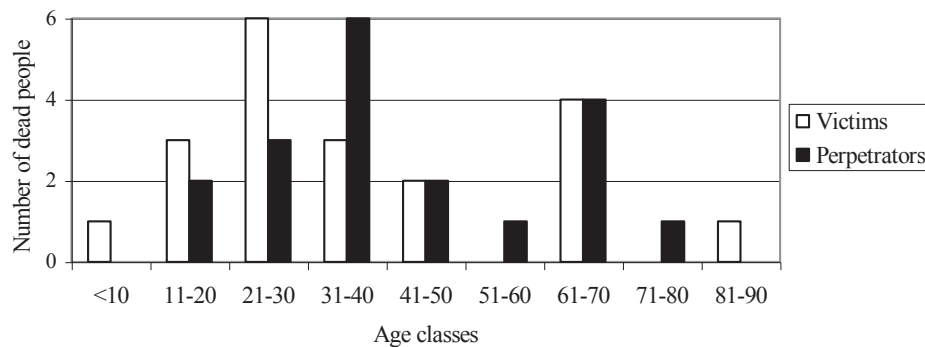


Fig. 2. Age distribution for perpetrators and victims.

Table 1
Perpetrators' and victims' job.

Job	Perpetrators	Victims	Total
Factory worker	1	3	4
Retired:	5	5	10
Unknown	2	5	7
Ex-bricklayer	1		1
Ex-factory worker	1		1
Ex-storekeeper	1		1
Security guard	1		1
Employed	1	1	2
Nurse		2	2
Bricklayer	2		2
Shop assistant		1	1
Driver	1		1
Hairdresser	1	1	2
Waiter	1		1
Student		1	1
Body-repairer	1		1
Unknown	5	6	11
Total	19	20	39

father. The murderers' age varied between 19 and 80 years (mean 42 years); the youngest was a 19-years old boy who killed his girlfriend while the oldest an 80-years old man who killed his wife. In 14 cases (70%) the homicide victims were younger than their murderers (mean 10 years), in 4 cases (20%) older (mean 5 years), while in 2 cases (10%) victims and murderers were old in the same way. Homicide victims and perpetrators were Italian in all but one event where the victim was a Romanian woman killed by a man of the same nationality. At the time of the event, most of the homicide victims and perpetrators were workers in activity, mostly unskilled manual workers; a quarter of victims were retired persons (Table 1). No information was available regarding perpetrator's mental illness, except for one case, suffering from depression.

3.2. Perpetrator–victim relationship

All the victims were related to their perpetrators by an intimate binding (Fig. 3; Table 5): wife (9 cases, 45%), ex-girlfriend (4 cases, 20%), girlfriend (3 cases, 15%), daughter (2 cases, 10%) and lovers (2

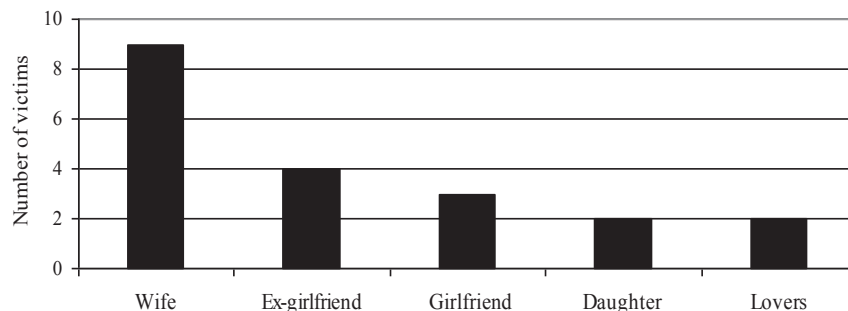


Fig. 3. Relationship in homicide–suicide events (homicide victims).

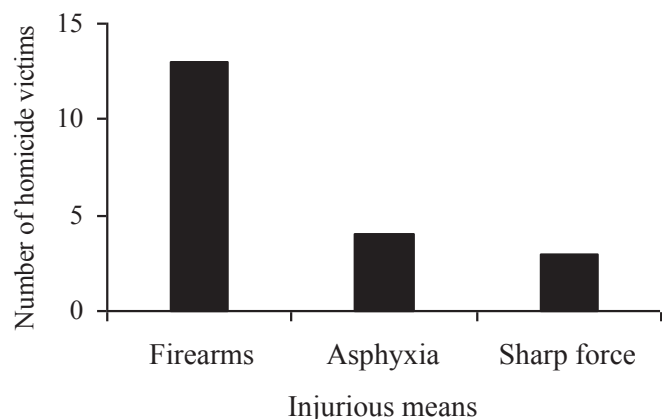


Fig. 4. Injurious means: homicide victims.

cases, 10%). “Uxoricide” (i.e. wife killing) was the most common crime, in particular among the victims older than 40 years; there were two “filicide” (i.e. son killing) events also: a father (43 years old) who killed his little daughter (3 years old) and a father (62 years old) who killed both his daughter (36 years old) and his wife (64 years old). This last event is the unique double homicide registered in our study: in september 2001 a 63-years-old man (ex-storekeeper) strangled his wife (housewife) and his daughter (factory worker) and then hanged himself. The man, before killing himself, called the police saying “*I killed my wife and my daughter, now it’s my turn*”. Relevant health problems seemed to be the motive: the man had a stroke few months before and a breast cancer was diagnosed to his wife.

3.3. Injurious means

Perpetrators used mainly firearms both for homicides (13 cases) and suicides (16 cases) (Figs. 4 and 5; Table 5). In homicides by firearms, the most common used was a single-action weapon (11 cases), in one case a multiple-action weapon and in another one a gun used for stunning cattle. In 8 cases a single shot was fired, two in 3 cases, three in one case and four in another case. The anatomical region more involved by firearms was the head (8 cases), followed by the chest (4 cases) and the neck (4 cases); in one case both the head and the chest were involved. Four victims were killed through asphyxial means: 2 with ligature strangulation, one with manual strangulation and one with both manual and ligature

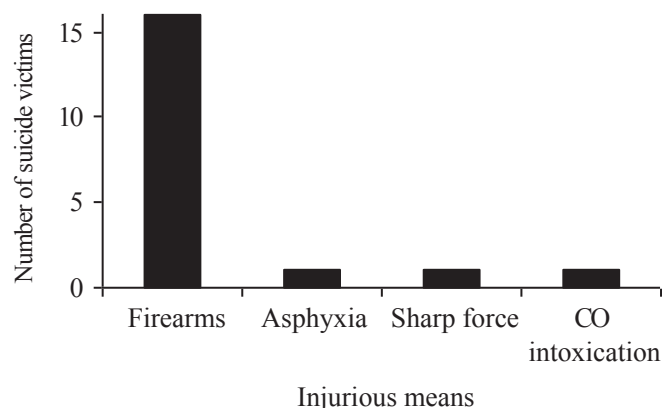


Fig. 5. Injurious means: suicide victims.

Table 2

Injurious means: correlation victims/perpetrators.

Injurious mean (homicide/suicide)	N
Firearm/firearm	12/12
Sharp force/sharp force	1/1
Gun for stunning cattle/gun for stunning cattle	1/1
Sharp force/firearm	2/2
Ligature strangulation/hanging	2/1
Manual strangulation/CO intoxication	1/1
Manual and ligature strangulation/firearm	1/1

strangulation. Three victims were stabbed: one at the throat, one at the chest and one at both the chest and the abdomen.

Regarding the suicides, in almost all the cases the perpetrator killed himself with a firearm (16 cases) shooting the head (14 cases) or the chest (2 cases). In one case the murderer cut his throat, in one case hanged himself and in one case died by carbon monoxide (CO) intoxication (Fig. 5; Table 5).

The same weapon was used both for murder and suicide in 14 events (Table 2). In 2 events the murderer shot himself after having stabbed his wife; in one shot himself after having strangled his wife; in one intoxicated himself by carbon monoxide after having strangled his girlfriend; in another one hanged himself after having strangled his wife and his daughter.

3.4. Scene of the crime

The events mostly occurred at home (Tables 3 and 5). In almost all of the events (18) perpetrator and his victim(s) were found together in the same place: home (13 events), car (4 events) and open country (one event). The victims found in the house were all intimate partners: 8 married couples, 2 lover couples, one couple of ex-engaged, one family (husband, wife and daughter). In 3 events the victims lied down one by one on the bed of their bedroom; in one event the man committed suicide in the bathroom after having killed his wife in the couple’s bedroom; in one event the couple was found in the kitchen; in one event the woman was found on the driveway while her husband inside their residence and in another event the victim and her perpetrator died both on the driveway (Table 3). All the homicide–suicide events occurred in a car involved young people, age range between 19 and 28 years, all intimate partners. In one event the victim and her perpetrator were found 20 km away: the girl in a field while her ex-boyfriend inside his car. In one event the victims, a father and his little child, were found together in an isolated field.

3.5. Laboratory findings

In 8 homicide victims and in 8 suicide victims toxicological examinations were conducted according to the District Attorney’s

Table 3

Scene of the crime.

Location	Victim	Perpetrator	Total
Home	14	13	27
Bedroom	7	3	10
Driveway	2	1	3
Hall		2	2
Sitting room	2		2
Kitchen	1	1	2
Bathroom		1	1
Unknown	2	5	7
Car	4	5	9
Field	2	1	3

Table 4
Toxicological examinations.

	Perpetrators (n = 8)	Victims (n = 8)	Total (n = 16)
Negative	5	6	11
Positive	3	2	5
Alcohol	2	1	3
Cocaine	1	1	2

Office order (Table 4). Alcohol was detected only in 2 perpetrators and in one homicide victim; cocaine was found in one murderer and in one homicide victim, both younger than 25 years old.

3.6. The motives

To better characterize the cases, four different groups of motives were identified (see also Table 5). In four events no informations regarding the possible motives were available.

- End of the relationship (6 events). The principal situational context was represented by a man unable to accept the end of the relationship. Usually the murderer was a young man obsessed by his ex-girlfriend or wife and unable to begin a new relationship.
- Old couples with significant illness (4 events). In these events the murderer was generally an old man, usually over 60 years old, who killed his wife. The reason was very often directed to stop health problems that commonly afflicted this class age. After a life spent together, the man doesn't want to separate from his wife or family and choose to die with them.
- Morbid jealousy (4 events). Suspicious of infidelity and fear to be separated were the triggers in these cases.

- Fear to lose the entrusting of the daughter (1 event). The fear to lose the baby was the homicidal trigger in this event.

4. Discussion

From 1987 to 2012, 19 homicide–suicide events were collected in Brescia County, corresponding to 0.06 events per 100,000 inhabitants per year, while in the same period 240 homicides were committed (0.77 homicide per 100,000 inhabitants per year). The low rate of this phenomenon is confirmed by other studies conducted in Italy^{3–6} and in other European and extra-European countries.^{7–15} From 1980's, several studies analyzed the epidemiology of the homicide–suicide events. In 1983 Coid¹⁶ compared data from 17 different reviews formulating the following conclusions: (I) the higher the rate of homicide in a population, the lower the proportion of perpetrator that then commit suicide; (II) the homicide–suicide rate appears to be the same in different countries despite differences in the overall rates of homicide. In the 90's, Milroy,¹⁷ after examining 27 studies from all over the world, came to the same Coid's conclusion. In 2009 a deeper analysis on 64 homicide–suicide events provided by Large et al.¹⁸ put on lights a different relationship between homicide–suicide rate and homicide: when the homicide rate doesn't exceed 5 homicide per 100,000 per year Coid's second law is preserved, while over 5 there is a strong association between homicide–suicide and homicide. This last thesis has been sustained by two studies from Durban (South Africa)¹⁹ (homicide–suicide rate 0.89/100,000; homicide rate 22.7) and Pretoria (South Africa)²⁰ (homicide–suicide rate 1.3/100,000; homicide rate 29.6): high homicide incidence seems to be connected with high homicide–suicide rate.²¹

Almost all the studies we compared described the victim mainly as a female and the murderer as a man: females represented 66–100% of the victims, while males 60–100% of the murderers, the last

Table 5
The 19 cases: summary. In bold the unique double-homicide event.

Event	Year	Perpetrator's age	Victim's age and relationship with perpetrator		Homicide Injurious mean	Suicide Injurious mean	Place	Motive
1	1987	33	30	Wife	Firearm ^a	Firearm ^a	Home	Unknown
2	1988	19	19	Girlfriend	Firearm ^a	Firearm ^a	Car	Unknown
3	1992	25	23	Ex-girlfriend	Firearm ^a	Firearm ^a	Car	Not accepted end of the relationship
4	1993	64	61	Wife	Manual/ligature strangulation Gun for stunning cattle	Firearm ^b	Home	Significant illnesses
5	1993	43	48	Wife		Firearm ^a	Home	Unknown
6	1995	67	62	Wife		Gun for stunning cattle	Home	Unknown
7	1998	58	31	Lover	Firearm ^a	Firearm ^a	Home	Morbid jealousy
8	1999	31	23	Girlfriend	Firearm ^a	Firearm ^a	Car	Not accepted end of the relationship
9	1999	20	18	Girlfriend	Manual strangulation	CO intoxication	Field (homicide)/ Car (suicide)	Morbid jealousy
10	2001	32	28	Wife	Firearm ^a	Firearm ^a	Home	Morbid jealousy
11	2001	33	40	Lover	Firearm ^a	Firearm ^a	Home	Not accepted end of the relationship
12	2001	62	36 64	Daughter Wife	Ligature strangulation	Hanging	Home	Significant illnesses
13	2001	37	42	Wife	Sharp force	Firearm ^a	Home	Morbid jealousy
14	2003	80	81	Wife	Sharp force	Firearm ^b	Home	Significant illnesses
15	2003	26	25	Ex-girlfriend	Firearm ^a	Firearm ^a	Home	Not accepted end of the relationship
16	2006	63	63	Wife	Firearm ^a	Firearm ^a	Home	Significant illnesses
17	2008	36	30	Ex-girlfriend	Sharp force	Sharp force	Home	Not accepted end of the relationship
18	2010	28	19	Ex-girlfriend	Firearm ^a	Firearm ^a	Car	Not accepted end of the relationship
19	2010	43	3	Daughter	Firearm ^b	Firearm ^b	Field	Fear to lose the baby

^a Single-action weapon.^b Multiple-action weapon.

one being usually older than their victims.^{4–14,16–26} Perpetrators' old age can suggest that the homicide–suicide risk increases with age, as proposed by Panczak et al.²⁷

Most of the perpetrators and victims were usually unskilled manual workers with a low educational level. A study from USA²⁸ underlines that a small percentage of murderers and victims completed a graduate or professional degree; similarly a study from Hong Kong reports that 76.7% of the offenders have less than 9 years of education.²⁹

Depression is the most frequent mental illness reported in homicide–suicide cases³⁰; in our study the only case in which such information was available concerned a man suffering from depression.

Almost all the homicide–suicide events were committed among intimate partners and the family residence represented the scene of the crime in most of the cases (69%); similar results were found in other studies.^{4,5,7–11,14,15,25,26,29,31,32} This location appears strongly connected to the kind of the relationship between the victim and the perpetrator: house represents the place where people spent together most of the time and it hides inside itself all the family/couple problems.

In 73.7% of the events the injurious mean used was the same both for homicide and suicide; the perpetrator usually killed his victim(s) and committed suicide with firearms (63% and 60% respectively). Usually the choice of the injurious instruments is influenced by their more or less easy availability according to the law; for example, studies from Hong Kong, where there is a strict firearm control, report a high proportion of asphyxia (strangulation/suffocation) from 1989 to 1998¹³ and sharp instruments from 1989 to 2005²⁹ as injurious means.

5. Conclusions

During the last 26 years (January 1987–December 2012), the Brescia Institute of Forensic Medicine treated 19 homicide–suicide events that led to 39 deaths (20 homicide and 19 suicide victims). Femicide (that is killing a woman)/suicide was the typical homicide–suicide pattern emerged in our study: all the victims were female killed by a man, more likely their intimate partner (mainly the husband or the ex-boyfriend) who usually used a firearm both for homicide and suicide. In the majority of the cases, homicide–suicide is the final result in not accepting the failure of a relationship: when a woman decides to break a liaison the man is unable to understand and respect her decision because he is not the master of the situation and having lost his role, he decides to determine the woman's fate.

Ethical approval

Not required.

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Conflict of interest

None declared.

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